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Daniel N. Shaviro
NYU, shavirod@juris.law.nyu.edu

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THE 2008 FINANCIAL CRISIS: IMPLICATIONS FOR INCOME TAX REFORM

Daniel Shaviro*

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Abstract:

Tax rules encouraging excessive debt, complex financial transactions, poorly designed incentive compensation for corporate managers, and highly leveraged home ownership all may have contributed to the financial crisis, but do not appear to have been among the primary causes. Even without a strong causal link, however, the preexisting case for tax reform at all these margins arguably is strengthened by the 2008 financial crisis, which suggests that tax rules not only fell short of classic neutrality benchmarks but generally leaned in precisely the wrong direction.

Keywords: tax reform, 2008 financial crisis, corporate integration, corporate finance, executive compensation

JEL Classifications: H20, H24, H25

^{*} Wayne Perry Professor of Taxation, NYU Law School. This paper is based on a talk prepared for the conference on Tax Policy and the Financial Crisis at Bocconi University, Milan, on April 30, 2009. I have benefited from conversations with Sam Eddins, Michael Keen, Geoff Lloyd, Yoram Margalioth, Alex Raskolnikov, and Joel Slemrod. I am also grateful to Julian Alworth and Giampaolo Arachi for detailed comments on an earlier draft, and to the D'Agostino-Greenberg Fund for financial support.

1. Introduction

Gore Vidal once stated that the four sweetest words in the English language are "I told you so." Can tax experts, despite not having predicted the great financial crisis and economic downturn that broke out in 2008, nonetheless properly indulge in the pleasure of saying these words? The rationale would be that defects in countries' income tax rules, long emphasized by the experts but without prompting any policy response, helped bring about or worsen the crisis.

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In favor of the above proposition, a number of different tax rules seem clearly to have pushed in the wrong direction at crucial margins where damage ended up being done. For example:

- --Excess leverage contributed to the financial crisis, and income tax systems around the world typically encourage corporate debt finance relative to equity finance.
- --The emergence and collapse of housing bubbles also played a crucial role, and in many countries, such as the U.S., income tax systems provided strong tax preferences for home ownership that, at a minimum, distorted investment patterns and may also have specifically fueled the bubbles.
- --Pervasive governance problems with respect to publicly traded companies played a crucial role, and income tax rules may in some settings have exacerbated these problems.
- --The proliferation of non-transparent financial instruments also helped trigger the crisis, and tax considerations often encouraged, or at least provided a convenient rationale, for the use of such instruments.

In short, the tax system's "fingerprints" are all over the "crime scene" of the 2008 financial crisis. Suggestive though this may be, however, the actual strength of the causal relationship between the two remains unclear, and is thought by most observers to be relatively small. For example, in some cases the tax biases may have been less important than other independent reasons for behavior that helped prompt the crisis. It also is noteworthy that differences in countries' income tax rules do not always seem to have been associated with differences in outcome, as one might have expected if tax were playing a key causal role. For example, housing bubbles were not limited to countries with large tax preferences for home ownership

Finally, at least one important tax distortion arguably should have leaned against the crisis. Tax systems with graduated marginal rates or loss nonrefundability notoriously can discourage risk-taking. Even if this is not generally desirable, one might think that it would have helped discourage the excess risk-taking that contributed to the crisis, if tax considerations had generally been playing a central role. Yet there is little evidence that nonrefundability or graduated rates mattered greatly to the managers who were taking absurd risks on behalf of publicly traded companies – although this partly reflects the exact design of the tax rules' risk discouragement, as distinct from the overall importance of tax considerations.

Even if one accepts that tax distortions did not play a dominant role in causing or exacerbating the crisis, the fact that they frequently pointed in the wrong direction is important. One cannot be sure that they will not play a greater role the next time around. Moreover, any causal role whatsoever suggests that the underlying distortions are potentially even more economically damaging than tax experts had previously

recognized. Thus, I offer here a very brief review of the main areas in which the tax system's fingerprints appear near the 2008 crime scene, and of how this association might affect subsequent tax policy thinking.

This chapter is organized as follows. Section (2) discusses the tax law distinction between debt and equity. Section (3) discusses risk-taking and the financial crisis.

Section (4) discusses the taxation of derivatives. Section (5) discusses corporate governance. Section (6) discusses the taxation of housing. Section (7) offers brief concluding remarks.

2. Tax law distinction between debt and equity

2.1 The underlying issue

Tax law, in common with accounting, insists on shoehorning a broad range of financial instruments, potentially with multiple continuously varying features, into the twin categories of debt and equity. The key differences in tax treatment are twofold. First, payouts by corporate issuers to holders generally are deductible as interest expense if the instruments are classified as debt, but are nondeductible dividends if the instruments are classified as equity. Second, for debt but not equity, periodic payouts may be imputed for tax purposes even if they are not actually made, leading to mandatory annual inclusion by holders (and potential deductibility by issuers).

Thus, equity-financed corporate earnings potentially are taxed twice, although (1) taxpayers can control the timing of the second tax or even avoid it permanently,² and (2) the shareholder-level tax may bear a reduced rate or receive other benefits such as

² In the U.S., for example, shares of corporate stock that are held until death can then be redeemed for their fair market value without generating capital gain. See U.S. Internal Revenue Code, section 1014.

¹ Original issue discount rules which have this effect are perhaps most elaborate in the U.S., but exist in numerous other countries as well. See Ault and Arnold (2004, 251-257).

imputation credits.³ Debt-financed corporate earnings generally are taxed only once, and at the holder's rather than the corporate issuer's marginal rate.

These rules are commonly are described as creating an income tax bias in favor of debt over equity. However, while frequently true, this statement needs to be qualified. Suppose a given tax system has marginal tax rates for high-income individuals that exceed the top corporate rate, and that such individuals can avoid paying the shareholder-level tax with respect to their corporate equity holdings. For such individuals, equity rather than debt is tax-preferred, as it permits them to pay tax on their returns to corporate investment at the lower corporate rate rather than their own rates (Miller 1977).

One further tax advantage of debt, given interest payments' deductibility, applies to cross-border investment. A multinational corporate group can use debt to shift net taxable income from high-tax to low-tax countries, both by having affiliates in the former countries do most of the group's borrowing and through the judicious use of intra-group debt – as in the case where a high-tax affiliate injects equity into a low-tax affiliate and then borrows the money back.⁴

For debt's frequently more favorable tax treatment to matter economically, the debt label must correlate with some underlying substance. If taxpayers can simply marry the preferred economic characteristics of financial arrangements to whichever tax label (debt or equity) they prefer – a situation that increasingly prevails although still not entirely – then the problem is simply one of making aggressive tax planning too easy, rather than of distorting economic decisions (Shaviro 2009a, 52-54).

³ See Ault and Arnold (2004, 329) (describing dividend relief provisions in various countries).

⁴ Even intra-group borrowing, while not increasing the multinational group's overall position as a net debtor, may affect a borrowing affiliate's other creditors (including not just other lenders but, for example, trade creditors, workers, and tort claimants.

In cases where the choice really does matter economically, as where a company decides to issue either classic fixed-rate debt or common stock, the frequent tax bias in favor of debt can matter for a number of different reasons. Most pertinently to the financial crisis, it can increase bankruptcy risk. Or it can lead companies to make the wrong choice, from a pre-tax standpoint, in using financial instrument design to mitigate agency costs in the use of investors' funds. Debt financing, for example, can encourage risky "heads we win, tails you lose" investment choices by managers that the prospective suppliers of funds may find difficult to monitor. While debt also has potential advantages — for example, it permits prospective investors to limit their inquiry into a given investment's economic prospects to the issue of potential default — creating a tax bias in either direction can undermine pre-tax optimization of the agency problem.

Thus, there would be a strong case for eliminating debt bias, and more generally making the debt-equity choice tax-neutral, even if the excessive leverage that contributed to the financial crisis did not make the bias seem especially pernicious. However, addressing debt bias, or more generally advancing tax neutrality in financial instrument choice, could take a number of different forms.

2.2 Corporate integration methods of addressing debt bias

For decades, academics have proposed (and countries have in varying degrees attempted) corporate integration, a term referring to a suite of alternative reform proposals all of which would move towards causing equity-financed corporate investment to be taxed, in effect, just once.⁵ At its most ambitious (but not in all versions), corporate integration would create tax neutrality not just between debt and equity, but also

⁵ For this purpose, equity-financed corporate investment is viewed as having been taxed just once, even if tax revenues are collected at both the entity and owner levels, so long as the overall net tax liability is similar to that which would arise if there were only one collection point.

regarding the use of corporate versus non-corporate entities, the timing of corporate distributions, and the form of such distributions (e.g., as between dividends and share repurchases) (Shaviro 2009a, 152-153). The forms that corporate integration could take include the following:

- 1) Dividend exemption Permitting shareholders to receive dividends tax-free would address debt bias, but would not achieve tax neutrality in financial instrument choice when there are tax rate differences between corporations and shareholders. Thus, under dividend exemption one would expect shareholders with high marginal rates (compared to the applicable corporate rate) to prefer equity from a tax standpoint, while those with low marginal rates preferred debt. The net result might often be tax discouragement of holding debt if, as is true in many countries though not, at present, the U.S., the corporate rate was significantly below the top individual rate. This would not be the case, however, if the marginal investors were tax-exempt entities, such as universities and pension funds.
- 2) Dividend imputation Under an imputation system, dividends are taxed to shareholders, but their amount is grossed up by the corporate tax payment attributed to the distributed earnings, and the shareholder receives a tax credit in the amount of the gross-up. Thus, suppose the corporate rate was 25 percent, the shareholder rate was 35 percent, and that a given shareholder received a \in 75 dividend (\in 100 with the gross-up). For tax purposes, the shareholder would have \in 100 of income and a \in 25 tax credit, and therefore would owe a further \in 10 of tax. Imputation goes further than exclusion towards the creation of tax neutrality between debt and equity, because it causes the

⁶ In a relatively pure imputation system, such as that currently applying in Australia, imputation credits are refundable if in excess of the shareholder's overall income tax liability, including upon receipt by a tax-exempt shareholder.

shareholder rather than the corporate rate ultimately to apply for equity, just as it does (to the extent of deductible interest payments) for debt. It does not appear to be the wave of the future, however. Among the countries that moved away from it recently, in response both to complexity concerns and European Economic Community (EEC) legal issues regarding nonresident investors, are France, Germany, and the U.K. (Ault and Arnold 2004, 327).

3) Comprehensive business income tax (CBIT) – In 1992, the U.S. Treasury Department released a comprehensive tax reform plan under which the tax treatment of debt and equity would largely be conformed, by denying corporate interest deductions and making the receipt of both dividends and corporate interests tax-free to investors. In effect, this would have been dividend exemption plus changing the tax treatment of debt to be like that for equity. The proposal was never seriously considered by the U.S. political system.

If CBIT had been seriously considered, key problems would have included transition (for example, how to treat preexisting debt) and the question of how to treat shareholder capital gain upon selling equity. The obvious solution would be to exempt the gain, for reasons of consistency with dividend exemption. This, however, would risk creating tax avoidance problems. Suppose, for example, that a taxpayer was planning to sell an appreciated building, and that this ordinarily would lead to a taxable capital gain. Absent anti-avoidance rules, all the taxpayer would need to do, in order to avoid the tax, is incorporate the building and sell the newly created shares. Obviously, special rules could be devised to address such scenarios, but they would add to the complexity of the CBIT approach and probably leave residual tax planning opportunities.

In the international setting, the CBIT approach has the advantage of preventing the U.S. of debt by domestic companies to reduce domestic source taxable income. Yet it arguably errs in centering tax liability at the entity level, rather than the investor level. In an era of high and rising worldwide capital mobility, many expect corporate tax rates to face continuing and eventually substantial downward pressure. The tax rates paid by individuals – at least as to active business income that is currently consumed – are not under similar downward pressure, however, insofar as people remain relatively immobile and cannot easily hide their income (e.g., reflecting international information exchange agreements between governments). This suggests that, even if one agrees that the tax treatment of debt and equity ought to be conformed, it may be preferable to use the debt model, in which the investor's tax rate ends up applying, rather than the equity model with its reliance on the entity's tax rate (Shaviro 2009a, 163).

4) Allowance for corporate equity (ACE) – Under an ACE system, corporations are permitted an interest-like deduction with respect to their equity. This may be accompanied, as under the business enterprise income tax (BEIT) proposed by Edward Kleinbard (2007), by requiring shareholders to include the notional return to equity even if no dividends have been paid (in keeping with the common tax treatment of debt, which may accrue annual taxable income even if interest is not being currently paid). This not only advances tax neutrality between debt and equity, but causes the shareholder (rather than the corporate) rate to apply to normal rates of return on corporate investment. A further advantage is its making the tax system's cost recovery rate for corporate

⁷ Tax rates on capital income that individuals earn on their savings is, however, frequently tax-exempt at the entity as well as the investor level, reflecting the widespread use of tax-exempt institutions (such as pension funds) and the use of tax rules (such as those in the U.S. for individual retirement accounts) that permit individuals to save for retirement without paying current income tax.

investments effectively irrelevant,⁸ thereby promoting inter-asset tax neutrality and reducing the importance of cross-border variations between systems (Jacobs 1997). ACE systems were enacted but swiftly abandoned in Austria, Croatia, and Italy, and continue to exist in Belgium and Brazil (Klemm 2007). The BEIT has not as yet received serious political consideration anywhere, though I have argued elsewhere that it merits serious consideration (Shaviro 2008).

2.3 Other methods of addressing debt bias

Given the lack of a clear causal relationship between the tax system's predominant debt bias and the financial crisis, the adoption of corporate integration in response to the crisis seems unlikely (even if the case for it has been modestly strengthened). Thus, it is worth considering other possible responses to debt bias. Three in particular are worth noting, especially as they have independent advantages from a tax policy standpoint.

1) Lower corporate rates – In the last fifteen years, numerous countries, in the European Union and elsewhere, have reduced their statutory corporate tax rates, often to significantly below top marginal rates for individuals. The motivating force has presumably been tax competition, reflecting that companies' locational investment decisions generally are more tax-responsive than individuals' national residence choices. Yet, even though addressing excess corporate leverage seems unlikely to have motivated creation of the tax rate differentials, the effect on tax incentives for leverage is potentially

⁸ Swifter cost recovery reduces the value of corporate equity on which the ACE deduction is computed. Or, to put it the other way around, slower cost recovery is offset by the allowance of additional interest-like deductions on the unrecovered equity, thus compensating the taxpayer for the effect of deferral on the deduction's time value.

⁹ Individuals' mobility in response to national tax rate differences may be on the rise, however. See, e.g., Kleven, Landais, and Saez (2010) (finding that, European soccer players who are superstars, but not players of more ordinary ability, respond significantly to national tax rates in their decisions regarding where to play).

significant. Raising the differential increases the pool of investors who find equity investment tax-preferable because it lowers the initially applicable tax rate. Thus, corporate rate cuts have the potential to move the overall system from one in which debt is predominantly tax-preferred towards one in which debt and equity simply have different investor clienteles.

- 2) Stronger thin capitalization rules Many countries have thin capitalization rules, limiting interest deductions either in general or for interest paid to nonresidents, if some comparative measure (such as the taxpayer's debt-equity ratio) suggests that the taxpayer's level of debt is excessive. The two principal purposes these rules serve are to limit tax base-eroding payments to nonresidents, and to prevent avoidance of the double corporate tax by reason of having only minimal equity. While both of these concerns sound purely in tax policy, rather than macroeconomic concern about the potential impact of excess leverage, thin capitalization rules could easily be designed to address the latter concern more forcefully. This might require making them significantly tougher, and generally counting borrowing from taxpaying residents as well as nonresidents.
- 3) Worldwide interest allocation rules for multinationals Since international tax planning creates an important incentive for the extensive use of debt by large multinational companies, arguably it should be addressed distinctively, as a way of using the tax system to combat excess leverage, even if thin capitalization rules are revised (where necessary) to apply equally to payments to residents and nonresidents. One possible mechanism is the source rules that all income tax systems use to determine what portion of a given taxpayer's income arose domestically.

Nearly all countries – with the important exception of the U.S. – generally treat domestic borrowing as reducing domestic taxable income, and foreign borrowing as reducing foreign taxable income, without regard to where the borrowing occurred. Thus, suppose a multinational company borrows \in 100 million in a country with a 30 percent tax rate, in order to invest the funds in a country with a 15 percent tax rate. Suppose the interest rate is 8 percent (or \in 8 million per year) and that the investment earns profits at only 7 percent (or \in 7 million per year). While the investment loses money before-tax, it is actually profitable after-tax if – as most countries' tax rules would permit – the taxpayer can deduct its outlay at a 30 percent rate while including its receipt at only a 15 percent rate. ¹⁰

The U.S. attempts to limit this incentive, though just for resident U.S. corporations, by applying complicated "worldwide allocation" rules to domestically incurred interest expense that may result in allocating it pro rata to foreign assets. These rules have been criticized on various grounds, including their complexity and asymmetric treatment of foreign borrowing (which cannot give rise to domestic interest expense). Unfortunately, the underlying problem has no good solution, given that the fungibility of money impedes ascertaining how a given loan was actually used at the margin (in the sense of what outlay would have been foregone if not for the loan). For present purposes, it is enough to note that, while the U.S. interest allocation rules are aimed at a

¹⁰ Deducting € 8 million at a 30 percent rate would reduce the annual outlay to € 5.6 million after-tax, while including € 7 million at a 15 percent rate would reduce the annual receipt to € 5.95 million.

¹¹ See generally Shaviro 2001.

¹² What is more, even if a given country's interest allocation rules "correctly" allocated interest expense, inconsistency between its rules and those of other countries could cause some of a multinational's interest expense to be deducted either more than once or not at all, yielding peculiar incentive effects.

tax policy concern – protecting the domestic tax base – they can in practice reduce overall tax incentives for excessive leverage.

3. Risk-taking and the financial crisis

Excess leverage was merely one input into a fundamental cause of the financial crisis, which was excessive risk-taking by a wide range of large public companies. Failed or bailed-out companies from the 2008 crisis, such as AIG, are widely viewed as having followed a well-known strategy under which one "earns small positive returns most of the time, but occasionally experiences dramatic losses .. [causing it to be known as] picking up nickels in front of a steamroller" (Duarte et al 2006). This strategy gave them years of high profitability, followed by socially costly collapses when, for example, housing or stock prices finally stopped rising steeply.

The popularity of the "nickels in front of a steamroller" strategy reflected, not just irrationality, bubble psychology, and herd behavior, but badly misdirected incentives outside the tax realm. At the entity level, limited liability and the "too big to fail" scenario made risky bets by large public companies potentially worth making, from the shareholders' standpoint, even if they had negative expected social payoffs. At the managerial level, executives with highly earnings-sensitive compensation arrangements knew that the business judgment rule (protecting them from liability for almost any arguably reasonable business decision) meant that they could take "heads I win, tails you lose" bets with the shareholders' money. In addition, the expectation that they could move swiftly from one company to another often gave them extremely short time horizons, and the income effect of being able to earn so much in a short time often meant that they did not count on having decades-long successful careers. A couple of big years

might set one up financially for life even if the "steamroller" hit one's former company a few years later.

All this is a non-tax story, of course. Insofar as the tax system affected incentives for publicly held financial institutions to take on risk, it seemingly pointed in the right direction (given the above problems) by discouraging it. Given loss nonrefundability, companies that win their gambles and have positive taxable income pay tax at the statutory rate, but those that end up with negative taxable income do not thereby generate negative tax liability (i.e., a right to be paid by the government based on the statutory rate). Instead, they are limited to claiming net operating losses (NOLs) against positive taxable income in other years, generally with very limited (if any) loss carrybacks and more extensive loss carryforwards. Where losses are carried forward, at a minimum the present value of the tax saving from them ends up being reduced, and in some cases they end up never being used.

Leaving aside concerns about excessive risk-taking that came to light in the financial crisis, this asymmetrically adverse treatment of losses has only one possible justification. It reduces the scope for companies to drain revenues from the government by creating artificial tax shelter losses. As things stand, tax shelter losses that survive legal scrutiny, or else are not properly challenged on audit, can eliminate a company's positive tax liability (including for other years, through the use of NOLs), but at least they cannot generate net refunds from the government. However, if one were confident that taxpayers reporting tax losses genuinely had economic losses, the main effects of asymmetrically adverse treatment of losses would include (1) discouraging risky investments that might have a positive expected pre-tax return, and (2) encouraging

otherwise inefficient mergers between companies so that those with positive taxable income could absorb the losses created by unsuccessful gambles.

Given, however, concern about excessive risk-taking, should we conclude that the tax system's loss limits pointed in the right direction in this regard, and accordingly that limits on using NOLs ought if anything to be made stricter? As it happens, in the U.S. prior to the 2008 crisis, effective corporate tax rates were rising, largely because tax losses were becoming more frequent (Altshuler, Auerbach et al 2008), implying that nonrefundability mattered. The problem, however, is that it arguably was misdirected insofar as the "nickels in front of a steamroller" strategy is concerned. That strategy may have excellent short-term odds of generating a profit, whereas the eventual loss when the "steamroller" hits may not matter to executives with short time horizons who may be long gone by that point.

This suggests that increasing risk neutrality by making the tax treatment of NOLs more favorable – for example, by lengthening carryover periods or allowing the amount carried forward to grow at an annual interest rate – might not greatly worsen the problems of excessive risk-taking in large public companies that contributed to the 2008 crisis. Two further considerations should be kept in mind, however. First, lengthening loss carryforwards while limiting their transferability (as many countries do) can create a "zombie firms" problem, in which failing companies that cannot produce efficiently are kept alive due to the value of their tax attributes. Second, the case for greater tax neutrality with respect to risk-taking does not mean that lengthening NOL carryovers, with retroactive application to preexisting losses, is good tax or macroeconomic policy in

¹³ The greater frequency of U.S. corporate tax losses in the years before 2008 largely resulted from a decline in average profitability, rather than from greater variance (Altshuler, Auerbach, et al 2008).

response to a down business cycle. The retroactive loosening of loss limits is misdirected insofar as risk-taking incentives going forward are concerned and, considered as fiscal stimulus, may amount to ill-directed "stimulus for losers," since companies that have been making money derive no benefit from it.

4. Taxation of derivatives

Huge markets in complex derivatives are widely viewed as having helped trigger the financial crisis. They enabled companies to place huge bets cheaply (often pursuant to the "nickels in front of a steamroller" strategy), while hindering investor and regulatory oversight and creating webs of counterparty risk that ended up transmitting credit problems across the world economy like a fast-traveling flu virus.

Derivatives also are good for tax planning, because they permit taxpayers to increase the degree of separation between the economic fundamentals of their positions on the one hand, and the tax system's interpretation of what they are doing on the other. To illustrate, suppose one wants the economic consequences of owning a particular stock, but does not want to be treated as the owner for tax purposes. Derivatives permit one to achieve much or all of the former without the latter. Thus, by the late 1990s, numerous non-U.S. investors who wanted to hold stocks in dividend-paying U.S. companies without being subject to U.S. withholding tax on the dividends learned that they could achieve this by purchasing total return swaps.

Economically, the swaps gave these taxpayers economic positions that were identical (counterparty risk aside) to holding the stock directly with debt financing at, say, the LIBOR rate. As a matter of U.S. tax law, however – at least as interpreted by sellers of the swaps, without timely pushback from the Internal Revenue Service – they

permitted avoidance of the withholding tax, based on the fact that U.S. tax law generally treats income from swaps held by foreign investors as foreign source income. Use of the swaps became sufficiently pervasive to prompt the Chief of Staff of the U.S. Congressional Joint Committee on Taxation to refer to a widespread view that "only fools pay withholding taxes on dividends today" (see Shaviro 2009b).

More generally, derivatives create three main types of problems for the tax system. The first is *asymmetry* in the treatment of counterparties, as in the case where a periodic time value return can be deducted on one side without being included on the other. The second is *inconsistency* in the treatment of a given economic arrangement, depending on how it is structured (as in the total return swaps example). The third is *imbalance* in the tax treatment of gains and losses, as in the case where one can readily realize an ordinary loss, but in the event of a gain can either defer it indefinitely or else ensure that it is capital gain, taxable at less than the ordinary income rate (Raskolnikov 2008).

Despite special cases, such as the pervasive use of total return swaps to avoid U.S. withholding tax, most observers believe that tax played only a secondary role in encouraging the growth of the derivatives markets that, in some key cases, spectacularly collapsed in 2008. One important reason why tax planning may not have borne greater responsibility for the derivatives explosion, at least in the U.S., is that U.S. tax law requires businesses that qualify as dealers in securities to use mark-to-market accounting with respect to all inventory items, and treat all gains and losses on such items as

¹⁴ However, an important exception to this widespread view is Eddins (2009), who argues that the growth and collapse of the collateralized debt obligation (CDO) market relied crucially on an underlying tax arbitrage play that required high risk in order to generate positive after-tax returns.

ordinary. Consistent mark-to-market accounting by both sides to a transaction eliminates any problems of asymmetry, inconsistency, and imbalance.

Even in cases with a non-dealer on at least one side, where tax considerations often may have encouraged the use of derivatives, the marginal impact may often not have been great. In practice, companies often used the same carefully structured derivatives transactions to minimize tax liabilities, manipulate reported earnings, avoid regulatory constraints, and minimize the effectiveness of investor oversight. In these over-determined circumstances, tax considerations, standing alone, may not have made a large difference even though they clearly encouraged the underlying transactions.

Given the underlying incoherence of realization-based income taxation, in particular when it relies on formalistic categories such as discrete "debt" and "equity," the tax rules for derivatives are hard to improve in more than a piecemeal fashion that targets particular transactions. Broader progress might require expanding the mark-to-market rules' range of application. This, however, would raise administrative questions about how to value assets that are not publicly traded, along with likely political concerns about taxpayer liquidity to pay tax on unrealized asset appreciation.

5. Corporate governance

One clear lesson of the financial crisis was that corporate governance problems proved considerably worse than many academics had previously believed – not just in the 1990s heyday of "Chicago school" era, but perhaps even in the aftermath of the wave of accounting scandals (pertaining, for example, to Enron, Parmalat, and Tyco) that had abounded in the first few years of the twenty-first century. Managerial incentives to overstate earnings and create short-term profits, at the price of serious long-term

downside economic risk (Bebchuk and Fried 2004), often proved beyond the disciplinary capacity of market forces. The problems were especially great with respect to financial firms, given the far greater difficulty of accurately assessing, say, AIG's economic performance than GM's.

Tax considerations contributed to the corporate governance crisis in various ways. For one, tax sheltering opportunities offer a rationale for reduced transparency that managers can then exploit to siphon resources from their firms without being observed by regulatory authorities, shareholders, or investors (Desai and Dharmapala 2008). For another, at least in the U.S., tax considerations may encourage the use of incentive compensation. In particular, such compensation can be used to avoid an ill-conceived \$1 million ceiling on deductible annual salary payments to top executives at publicly traded companies. 15 In addition, executives often can defer their U.S. income tax liability on the receipt of valuable property such as stock options. ¹⁶ While this deferral may yield no overall tax benefit, since generally the employer's deduction is deferred as well, ¹⁷ it has the optical benefit (from the managers' standpoint) of permitting compensation packages to appear smaller, as they need not be grossed-up to achieve after-tax equivalence with payments that are currently taxable to them and deductible by the employer. Although incentive compensation is commonly rationalized as improving executive performance, it arguably backfired in recent years, both by encouraging an overly short-term focus (along

¹⁵ U.S. Internal Revenue Code section 162(m).

¹⁶ See U.S. Internal Revenue Code section 83(a) (generally permitting deferral where the property is subject to a "substantial risk of forfeiture").

¹⁷ See U.S. Internal Revenue Code section 83(h). If employer and employee marginal tax rates are the same, this makes deferral tax-neutral, and thus seemingly irrelevant if the parties would respond to immediate taxation by grossing up the nominal option value so as to compensate the employee for it. Managers at publicly traded companies may nonetheless prefer deferral for optical reasons, because the gross-up makes their compensation packages appear to be larger.

with outright manipulation of reported earnings), and by reducing executive compensation's transparency (Bebchuk and Fried 2004).

Standard tax reform principles would suggest treating different types of executive compensation neutrally, rather than inducing greater use of incentive compensation. One could even argue, however, for tilting the tax rules against at least poorly-designed incentive arrangements. Thus, suppose one believes that poor design of executives' incentive compensation packages is too deeply rooted in current practice and institutional arrangements for even the shock of the financial crisis to induce the adoption of adequate changes. If one therefore supports a regulatory response to the problem, the tax system offers one possible vehicle. For example, rather than affirmatively requiring or barring particular types of compensation arrangements, one could use differences in tax treatment as a non-compulsory thumb on the scales. This might involve imposing modest tax penalties (including the denial of tax benefits such as deferral on the employee side) for compensation packages that were viewed as departing from best practices.

A second area in which tax policy responses to corporate governance problems have recently been discussed pertains to the relationship between taxable income and financial accounting income. Managers of publicly traded companies notoriously attempt, in many cases, to shelter taxable income on the one hand while inflating reporting earnings on the other, leading some commentators to suggest that closer relationships between the two income measures be mandated (Desai 2005; Shaviro 2009c). One of the main countervailing concerns, however, is that this might lead to the

¹⁸ The arguably suboptimal typical design features of typical executive compensation packages include failing to require retention of one's financial interest in the employer for a sufficiently long period (encouraging short-term thinking), and rewarding stock prices increases even when they are shared with the stock market, or one's industry as a whole, rather than reflecting distinctive company performance. See, e.g., Bebchuk and Fried 2004.

politicization of accounting standards, as legislatures that care more about the tax base expanded their accounting interventions in response to the linkage (Hanlon, LaPlante, and Shevlin 2005). 19

6. Taxation of housing

Tax policy experts have long argued against income tax preferences for housing. The chief argument is the standard efficiency point that tax-favoring one form of consumption over others leads to deadweight loss, as assets are shifted to tax-favored uses even when this reduces their pre-tax yield. Tax preferences for housing, and in particular home ownership, are nonetheless widespread, albeit not universal. This presumably reflects political considerations, as well as the administrative difficulty (or perhaps simply the counter-intuitive character) of taxing homeowners on their imputed rental income.

When exclusion of imputed rental income is accompanied by generally permitting home mortgage interest to be deducted, as under the U.S. income tax rules, the problems caused may go beyond societal over-investment in homes relative to other assets.

Taxpayers with limited net saving are effectively encouraged to hold a risky, undiversified asset with substantial leverage. If the tax rules also (as in the U.S.) provide a substantial exclusion for gain realized upon the sale of a home, while generally taxing other capital gains, the inducement to neglect elementary principles of investment diversification is greater still.

¹⁹ In the European Community, substantial progress towards developing a depoliticized common consolidated corporate tax base (CCCTB) might pose the question of whether to reestablish the close relationship between the tax and accounting income bases that existed in much of the EC until accounting standards began to be internationalized (Shaviro 2009d).

Provisions of this kind clearly would be expected to promote over-investment in real estate, along with the prospect that, in a down market for real estate, there could be extensive defaults and a serious impact on many households' net retirement saving. It is a somewhat different question, however, whether such provisions should be expected to (or in the early 2000s did) promote the emergence and collapse of a bubble market in real estate. Market bubbles remain an ill-understood dynamic phenomenon, whereas stable tax preferences might only affect the equilibrium. What is more, the emergence of housing bubbles, and their collapse in 2008, does not appear to have been limited to countries with substantial tax preferences for home ownership. Elsewhere in this volume, Hemmelgarn, Nicodeme, and Zangari (2011) conclude that "the available evidence is mixed" regarding the relationship between tax rules and price developments, "suggesting that lax monetary policy and increased risk-taking by lenders are more powerful explanations of the housing bubble."

Nonetheless, the 2008 financial crisis arguably strengthened, in two main respects, the already well-understood case for more neutral treatment of housing. First, the crisis dramatically illustrated the dangers of under-diversification and highly leveraged home ownership. Second, while tax-preferring home ownership sometimes is justified on the ground that it has positive externalities (e.g., by encouraging residents to invest in neighborhood quality), the recent fallout suggests that it also may have negative externalities. For example, the higher transaction costs of moving when one is a homeowner, rather than a renter, may slow economic adjustment when jobs disappear in some regions and arise in others. This may adversely affect, not just the homeowners themselves, but prospective employers and social welfare systems.

7. Conclusions

Tax rules encouraging excessive debt, complex financial transactions, poorly designed incentive compensation for corporate managers, and highly leveraged home ownership all may have contributed to the financial crisis, but do not appear to have been among the primary causes. Even without a strong causal link, however, the preexisting case for tax reform at all these margins arguably is strengthened by the 2008 financial crisis, which suggests that tax rules not only fell short of classic neutrality benchmarks but generally leaned in precisely the wrong direction. With respect to excessive risk-taking, while the tax system arguably leaned in the "right" direction by treating gains and losses asymmetrically, this seems unlikely to have mattered much to corporate managers who were pursuing short-term profits via the "nickels in front of a steamroller" strategy.

In most of the above areas, increasing tax neutrality has much to recommend it, even apart from any impact on the likelihood of repeat financial crises in the future. With respect to corporate governance, however, if greater regulatory oversight is deemed necessary, the tax system provides a possible vehicle for intervention that would rely on shaping incentives through non-neutral rules (for example, requiring that incentive compensation be appropriately designed if it is to receive favorable tax treatment, such as deferral). Even if this is not done, however, tax rules that treat even poorly-designed incentive compensation more favorably than cash salary clearly are inappropriate and should be eliminated.

With respect to the effect of loss nonrefundability on risk-taking, allowing greater use of preexisting NOLs would not improve incentives going forward. In addition, it might be criticized as misdirected "stimulus for losers," and should not be structured in

such a way as to encourage the perpetuation of "zombie firms" that otherwise would be liquidated.

In addressing the non-neutral tax rules that pointed in the wrong direction in 2008, the chief obstacle is political choice. Expert views favoring greater neutrality were well-known, but were not heeded. In the aftermath of the crisis, the lack of a strong causal link suggests that this state of affairs may be unlikely to change much. However, the one case in which discernible political trends arguably may end up pointing in the right direction concerns the tax system's debt bias, which could be significantly reduced if corporate rates continue declining relative to top individual rates.

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